自動控制II-HW1

102303022 機械4A 賴言厚

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| 設閉迴路pole:-5,-4,-50  系統示意圖:    由3個pole回推出B0 B1 A0之值,並觀察step response |

clc;

clear;

i=sqrt(-1);

%三個根

x1 = 5;

x2 = 4;

x3 = 50;

%閉迴路分母係數

b = x1+x2+x3;

c = x1\*x2+(x1+x2)\*x3;

d = x1\*x2\*x3;

C = [1 1 0;-3 3 1;2 0 3];

X = inv(C)\*[b+3;c-2;d]

h = tf([X(2) 3\*X(2)+X(3) 3\*X(3)],[1 b c d]);

figure(1);

stepplot(h)

figure(2);

rlocus(h)

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| 下圖得出step-response以及root-locus  Overshoot = 9.55%  Risetime = 0.0319  Settletime = 0.726  Finalvalue = 0.985 |



